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(54) Title: CROSS-PLATFORM SERVER CLUSTERING USING A NETWORK FLOW SWITCH

(57) Abstract

A network flow switch (205) is provided for connecting a pool of IP routers (260, 270, 280) to a cluster of IP servers (200) sharing a single IP address (IP 192.31.65.1) without requiring translation of the IP address. Rather, all IP servers (210, 220, 230, 240, 250) have the same IP address (IP 192.31.65.1). The network flow switch (205) routes packets to individual servers by writing the data link layer address of the destination IP server in the destination data link layer address field of the packet. However, no data link layer address translation is required for packets transmitted from the IP servers (210, 220, 230, 240, 250) to the IP routers. Since in a typical client-server environment, the number of packets sent from the server to the client is much greater than the number of packets sent from the client to the server, the data link layer address translation requires very little overall processing time. The network flow switch (205) also performs load balancing and fault tolerance functions. When the network flow switch (205) receives a packet destined to the cluster of IP servers (200), the packet is routed to the IP server with an optimal workload, so as to ensure that the workload is evenly distributed among the IP servers (210, 220, 230, 240, 250).

